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Newsline

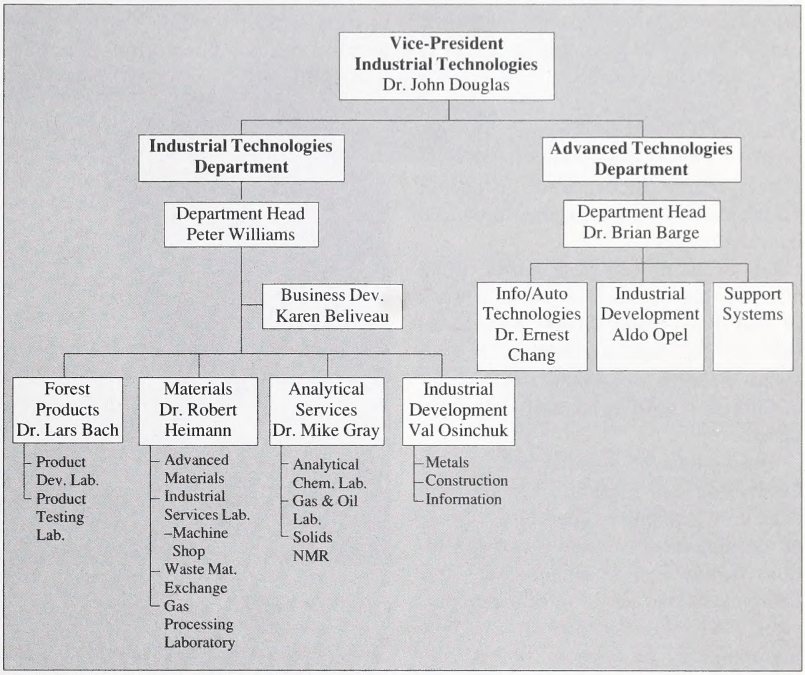
Industrial development activities have been reassigned

Industrial development is no longer a separate department of the Alberta Research Council. As of April 1, industrial advisory staff, and their activities, were placed under the Industrial Technologies Department in Edmonton and the Advanced Technologies Department in Calgary and Lethbridge.

Andy Gilliland, who resigned as joint manager of the department, will continue as the full-time coordinator of the National Research Council's Industrial Research Assistance Program (IRAP).

In announcing this organizational change, Dr. John Douglas, vice-president, Industrial Technologies, said he believes the move will mutually reinforce the effectiveness and capabilities of both industrial advisory services and the two host departments.

Coincident with the reorganization are modifications to the Advanced Technologies and Industrial Technologies organizational structures.



Industrial Technologies Division

The Advanced Technologies Department has been arranged into three groups broadly reflecting research and development activities, advisory activities and support systems.

Dr. Ernest Chang has assumed responsibility for the consolidated efforts of the Information and Automation Technologies Group. Aldo Opel is responsible for the Industrial Development Group. Leadership of the Support Systems Group, including industrial information services, administrative support, facilities, business development, contract liaison, and Calgary computing, has not yet been assigned.

The Industrial Technologies Department has similarly been arranged into four groups. Dr. Lars Bach will continue to be responsible for Forest Products, including the Panel Development and Panel Testing laboratories. Dr. Robert Heimann continues to head the Materials Section which now includes Advanced Materials, the Gas Processing Laboratory, the Industrial Services Laboratory (including the Machine Shop), and the Waste Materials Exchange.

Responsibility for Analytical Services will stay with Dr. Mike Gray and includes the Analytical Chemistry Laboratory, the Gasoline and Oil Testing Laboratory and Solids Nuclear Magnetic Resonance (NMR). Val Osinchuk is now responsible for Industrial Development, and manages technical staff in the areas of metals, construction and information. Karen Beliveau is now assigned to the department as business development officer and will be the joint research venture program representative in Edmonton. Bill Kay has taken over responsibilities as manager of the Alberta Waste Material's Exchange, the position previously occupied by Karen.

This change will promote a closer working relationship between the Alberta Research Council and those who manage the IRAP program according to Dr. Douglas.

"The Research Council will benefit greatly from the current industrial intelligence the IRAP people bring in," he says. "IRAP managers also will benefit through having greater access to the Research Council's capabilities."

Newsline is a monthly publication for the employees of the Alberta Research Council.

Please send all submissions
and direct all questions to
Carmen Forster
Alberta Research Council
PO Box 8330, Postal Station F
Edmonton, Alberta
T6H 5X2

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Ventura – time is money

More money and shorter publication production time – these are the benefits gained by every Research Council department that uses the new Ventura desktop publishing system now available in the Publishing and Graphics Department.

Prior to Ventura, documents were phototypeset and manually pasted up into predetermined formats – sometimes requiring three to four full paste-ups to bring them to print. Now final copy is electronically imported directly into Ventura, where the document is formatted on a full-page screen using style sheets which incorporate corporate visual identity standards, then produced on a laser printer.

On an 80 to 150 page report, using Ventura, clients can save up to a week of staff time – about $2,000. This makes the service more affordable. It also means a shorter turnaround time. Manuscripts are published and delivered faster.

The volume of material prepared by Publishing and Graphics for printing demanded equipment upgrading. "Some of the equipment we used is two generations behind current technology," says Sharon Gee, director of Information Services. "We chose Ventura after reviewing a number of systems. It was considered the best in meeting our specific needs, as well as allowing us to upgrade our service."

"Ventura allows us to make changes at the design stage and still know exactly what the finished product will look like," says Dale Hite, graphic designer and publishing coordinator. "The final format can be selected from several versions of a document."

Another feature is Ventura's graphic capabilities. For a recent Gasoline and Oil Testing Laboratory publication, graphic files from RS1, a statistical file, were imported directly into Ventura. This would otherwise have meant significant drafting time. Images also can be imported from a number of graphic software packages, including MacPaint, PC Paintbrush, GEM, AutoCad, Lotus, Mentor, CGM and VideoShow.

Ventura is also being used for some typesetting functions, further increasing savings. "We are making use of Ventura for other projects, such as bulletins, displays and small jobs that are not cost-efficient to phototypeset," says Dale.

Despite the new system's capabilities, Sharon asserts that experienced staff are still required. For all its features, Ventura, like any desktop publishing system, is only a tool used to format good graphic design. Creativity cannot be programmed into a system. Ventura has freed the designer from manual paste-up duties, but the design skills are still required to make documents aesthetically pleasing.

Looking to the future, a better quality printer and a scanner for copying graphics mean that the Research Council will be able to produce print-quality documents entirely in-house, further increasing savings in time and money.

Karen Parrish, typesetter and operator of Ventura, uses the system to design display panels for Devon's open house.

Technical seminar June 28

Dr. Gordon Bird, Oil Sands and Hydrocarbon Recovery Department, will present the next technical seminar Tuesday, June 28 at 1 p.m. in the south Edmonton auditorium. His topic will be "The Role of Geochemistry in Thermal Oil Recovery and Related Areas". All staff are encouraged to attend this seminar series, designed to increase awareness and appreciation of our research projects.

Dr. Bird will make his presentation to Calgary staff Thursday, June 30 at 1 p.m. in Conference Room 1.

Staff notes

Dr. Brad Thompson, Biotechnology, was recently appointed adjunct professor in the University of Alberta's Chemical Engineering Department. This is his second appointment. He also is an adjunct professor in the University of Alberta's Microbiology Department.

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Dr. Thompson represented Canada at the Huntsville Technical Society Annual Meeting this May, held in Huntsville, Alabama. While there, he presented a talk titled, "Foreign Relations In Space – Canada's Perspective."

★ ★ ★

Millie Miles, Library, has returned from education leave. She will spend her afternoons in the Edmonton Publications Sales office, and her mornings in the library. New employee Susan Anderson will staff the Calgary branch library on Wednesdays.

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Combination of experience benefits Guyana

An uncommon combination of research experience in the areas of geology and ceramics led Dr. Don Scafe, Geological Survey Department, to Guyana, where he is advising this Third World country on how to improve its fledgling ceramics industry.

Dr. Scafe visited the country this spring to review the results obtained by his Guyanese colleagues through a sampling and testing program, established during a similar trip in 1987. The trip was sponsored by the International Development Research Centre (IDRC) in Ottawa, which is dedicated to helping Third World countries develop their industrial minerals resources. The IDRC also has a contract with the Research Council for some laboratory tests and Dr. Scafe's services in Edmonton.

Guyana has only three exports – bauxite, sugar and rum – and few tourist attractions. Dr. Scafe was called in to help the Guyanese characterize certain locally available clays, geologically and ceramically, to aid in the development of new export products, such as tableware, toilets and sinks.

The Guyanese crew, using a power auger in a coastal rice field, practices drilling and sampling techniques for the ceramic raw materials project. – *High Iron Photos*

"The Institute of Applied Science and Technology in Guyana has staff devoted to ceramics, who are looking for a better quality clay. They are particularly interested in finding a ball clay – a type of plastic clay that holds all the other ingredients together when you are making a product, melts quickly, and fires white or near white. The melted material also acts as a glass bond after cooling. I was asked to set up the program to sample and test clays readily available on the coast for these properties."

Dr. Scafe's study of the coastal clays has determined that they do not meet the criteria of a ball clay and should not be considered for ceramic purposes. Preliminary studies conducted on clay deposits located in Guyana's interior, however, have shown promising results and it is anticipated that the Guyanese will apply to the IDRC for a one-year extension for Dr. Scafe's participation in the research project.

"When you go into a Third World country as a research consultant it is helpful to bear in mind a couple of things," he says. "You will accomplish a lot if you go in with the idea of conducting the project as simply as possible, using as much of the country's physical and intellectual resources as possible. Transfer as much of your knowledge to your local counterparts as you can. It also is important not to saddle them with a lot of high technology equipment and procedures that they might not be able to maintain and use once you have left.

"Assisting these countries is a rewarding experience and helpful, I believe, in opening the door to new opportunities for the Research Council."

Nine employees recently completed an in-house supervision skills course and received certificates from Dr. Clem Bowman, President. The course, developed by the Human Resources Department, stresses the importance of good communications and interpersonal skills. From left, front row: Janis Koehler, Occupational Health Unit; Nell Luck, Terrain Sciences Department; Wolf Gut, instructor; Kelly Furtak, Oil Sands and Hydrocarbon Recovery Department; Barb Storms, Library; back row: Randy Parsons, Materiel Management; Bob Tower, Industrial Technologies Department; Dr. Clem Bowman; Dr. Ed Bertram, Industrial Technologies Department; Larry Nikiforuk, Terrain Sciences Department. Absent was Dr. Robert Heimann, Industrial Technologies Department.
The course was run in Calgary for the first time in May. It will be offered to staff in Edmonton again starting late September.

Japanese scientist to spend year in Nisku

The Canada/Japan Coal Liquefaction Cooperative Agreement, and Japan's interest in using Alberta coal as an energy source, have brought Dr. Hideo Narita to the Coal and Hydrocarbon Processing Department as Visiting Scientist for the next year.

Dr. Narita is a senior research scientist with the Government Industrial Development Laboratory (GIDL) in Hokkaido, where subbituminous Alberta coals have been tested for liquefaction purposes.

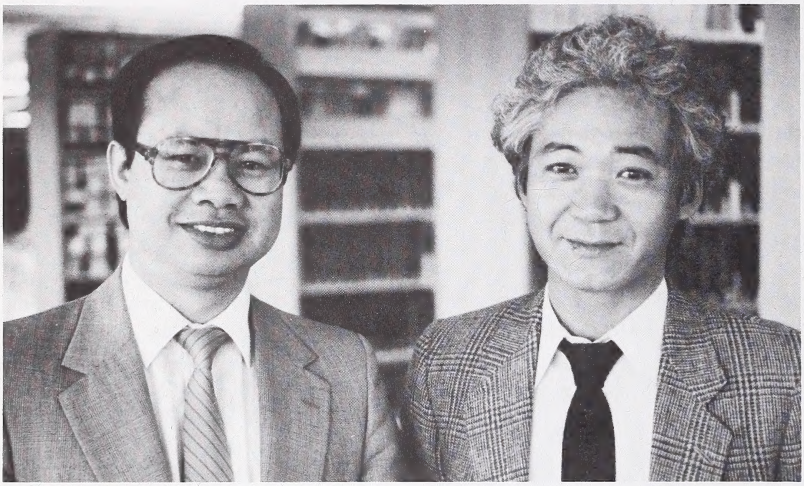
He has a Ph.D. in nuclear physics and practical expertise in the area of coal liquefaction, having built and operated a coal liquefaction plant at his institute.

While here, he will work with Dr. Theo Lee, Coal and Hydrocarbon Processing Department, on various engineering aspects of reactor design, with a view to the scale up of research results to pilot or demonstration plants.

Dr. Narita and Dr. Lee also will address issues in coal co-processing technology, such as reactor bubble dynamics, flow pattern and gas holdup. The focus of their work will be on the behavior of co-processing under high temperature and pressure conditions - information currently lacking in research and industry.

"Coal reserves are limited in Japan," Dr. Narita says. "Before we can make use of imported reserves, it is necessary for us to understand their properties, and the technology associated with their treatment and utilization."

The Alberta Research Council and Japanese coal scientists have a longstanding relationship. Several scientists from Japan worked on Post-doctoral Fellowships during 1968 to 1978 – two of them from GIDL. Dr. Narita is the first Japanese visitor to come here under the cooperative agreement between Canada and Japan. "The work in co-processing that I perform with Dr. Lee will enable my country to make better use of the coal we import," he says.



Dr. Theo Lee and Dr. Hideo Narita

Deep waste injection studies get 'super' boost

The Alberta Geological Survey's Basin Analysis Group was recently awarded an equivalent of $100,000 worth of computer time by the Supercomputer Allocation Committee, which has facilities at the University of Calgary.

Dr. Stefan Bachu, manager of the group, explains that the computer time – 40 hours on the CYBER 205 supercomputer and 20 hours on the CYBER 860 front end computer – will be used to implement the group's new three-dimensional model CFEST (Coupled Fluid-Energy-Solute Transport).

"The new model will allow us to take more variables into account, resulting in a more accurate and complex simulation of deep waste disposal. To run the program internally could require all of the Research Council's existing computer resources, which would not be efficient. Use of the supercomputer will allow us to study bigger and more complex cases, and to take into account all effects in the study of liquid flow."

Dr. Bachu says that implementation of the new model on the supercomputer will significantly increase his group's ability to study environmental issues and problems associated with transport processes in the ground. "This will be of benefit to the province, as we will be able to apply the more sophisticated model to deep waste injection, landfills, mine wastes, and other problems related to the underground flow of water."

Employee changes

We welcome to the Research Council: **Sherry Brockman,** Financial Services; **Emma Cheung,** Financial Services; **David Cox,** Biotechnology; **Julia Driver,** Advanced Technologies; **Thomas Gentzis,** Coal and Hydrocarbon Processing; **Darcy Grant,** Advanced Technologies; **Steve Lee,** Industrial Technologies; **Gregory Mandryk,** Geological Survey; **Beverly Oscar,** Advanced Technologies; **Eddie Polukoshko,** Industrial Technologies; **Monica Price,** Geological Survey; **Christopher Prince,** Advanced Technologies; **Elizabeth Schultz,** Financial Services; **Mary Ann Sorochan,** Coal and Hydrocarbon Processing; **Jan Tollenaar,** Biotechnology; **Ken Wallewein,** Advanced Technologies; **Wendy Zwickel,** Publishing and Graphics.

We say goodbye to: **Tamara Danyluk, Dale Hoover, Darlene Korpany, Brenda Leeson, Terry McDonald, Peggy Sobchyshyn, Greg Sterenberg.**